Remarks

Upon entry of the foregoing amendment, claims 1, 8, 13, 15, 17-20, 22 and 24-55 will be pending in the instant application. Claims 2-7, 9-12, 14, 16, 21 and 23 have been canceled without prejudice or disclaimer. Applicants reserve the right to pursue the canceled subject matter in continuing applications. Claims 24-55 have been added to claim embodiments that Applicants regard as the invention. Support for the amendments to the specification and claims can be found throughout the specification as filed.

In addition, the title has been amended to more precisely reflect the presently claimed invention and a computer readable format of the Sequence Listing has been submitted. No new matter has been introduced.

Applicants note that the presently claimed invention, polypeptides encoded by Gene No. 570, is 100% identical to delta-tubulin. Applicants also note that it is asserted in the priority application upon which the instant application claims priority to that the presently claimed invention is homologous to tubulin Uni3 [Chlamydomonas reinhardtii]. *See* U.S. Provisional Application Serial No. 60/125,359, filed March 19, 1999, pages 32-33. Based on its homology, the claimed invention is likely to share some biological functions of tubulins. Combined with its tissue distribution in human microvascular endothelial cells, polypeptides of the claimed invention and antibodies to the claimed invention would be useful for the diagnosis, treatment and/or prevention of microtubule associated vascular disorders affecting endothelial tissues which include, but are not limited to, atherosclerosis, arteriosclerosis and stroke. *See* U.S. Provisional Application Serial No. 60/125,359 filed March 19, 1999, page 33.

Non-Compliance of Sequence Disclosure

In the Office Action dated April 7, 2003, the Examiner discloses that the application fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825 because the computer-readable format of the sequence listing does not match the application specification.

Applicants hereby submit a second copy of a computer-readable form (CRF) of the sequence listing and a separate statement under 37 C.F.R. § 1.825, asserting that the second copy of the CRF is identical to the original CRF filed with the complete application on September 12, 2001 and identical to the original courtesy copy of the sequence listing, also filed on September 12, 2001.

Applicants respectfully submit that at the time of filing the present application, a CRF in the form of a CD-ROM containing the sequence listing was filed along with a courtesy paper copy of the 12,317 page sequence listing, as evidenced by the date-stamped postcard receipt, the Statement under 37 C.F.R. § 1.821(f), the Transmittal and Submission under 37 C.F.R. § 1.824 and 1.52(e)(3)(ii), and a print out of PAIR, indicating that such a CD-ROM was indeed received and docketed at the USPTO (see Entries #2 and 4), all submitted herein as Exhibits A, B, C and D, respectively.

Subsequent to filing, upon specific request by Tammy Koontz from the Publications Branch of the U.S. Patent Office, the tables disclosed in the present specification were copied onto CD-ROM and then filed, along with a transmittal letter specifically addressed to Tammy Koontz on December 4, 2002 to expedite publication of the application. This is evidenced by the transmittal letter, submitted herein as Exhibit E. However, this CD-ROM was mistakenly processed by STIC as a CRF (see Exhibit D, Entries #10 and 11).

Therefore, Applicants respectfully submit that the present application was complete as filed, and the CD-ROM currently in the Patent Office's case file is not a CRF, but a courtesy copy made solely for the purposes of Publications. Thus, the CD-ROM should be sent back to Publications under attention of Tammy Koontz. Furthermore, it appears that the original CRF containing the sequence listing is no longer matched with the USPTO's case file, leading to the present "Sequence Non-Compliance." Should the Examiner need any clarification of the above, Applicants are happy to do so at her convenience.

Provisional Election With Traverse

Claims 2-7, 9-12, 14, 16, 21 and 23 have been canceled without prejudice or disclaimer.

The Examiner has required an election under 35 U.S.C. § 121 of one of ten groups cast by the Examiner. The Examiner contends that the individual groupings are distinct, each from each other.

Preliminarily, Applicants point out that new claims 24-28, 30-34, 36-39, 41-44, 46-49 and 51-54 fall within the domain of Group III as cast by the Examiner.

In order to be fully responsive, Applicants hereby provisionally elect, *with traverse*, the invention of Group III, drawn to polypeptides, represented by new claims 24-28, 30-34, 36-39, 41-44, 46-49 and 51-54.

Moreover, in order to be fully responsive, Applicants hereby elect sequences corresponding to polypeptides encoded by the deposited HDPKC55 cDNA and/or that having an amino acid sequence disclosed in SEQ ID NO:3177. New claims 24-55 read on the elected sequences.

With respect to the Examiner's division of the invention into ten groups and the reasons stated therefor, Applicants respectfully traverse.

Applicants point out, that even where patentably distinct inventions appear in a single application, restriction remains improper unless the examiner can show that the search and examination of these groups would entail a "serious burden". (*See* M.P.E.P. § 803.) In the present situation, the Examiner has failed to make such a showing.

Applicants submit that a search of polynucleotide claims of the invention would provide useful information for examining claims directed to both polynucleotides and the polypeptides encoded by these polynucleotides. In certain of the claims this is especially true because the polynucleotide sequence of these claims is defined in part by the polypeptide that the polynucleotide sequence encodes. Further, Applicants point out that, in many if not most publications, where a published nucleotide sequence is an open reading frame, the authors also include, as a matter of routine, the deduced amino acid sequence of the encoded polypeptide. *See*, for example, Figure 1A of Reference AA submitted herewith in PTO/SB/08.

Similarly, a search of the polypeptide claims of the invention would clearly provide useful information for the examination of claims directed to antibodies either produced in response to or having affinity for the subject polypeptides. This is because antibodies are frequently defined by the antigens that they are produced in response to and the epitopes to which they bind. Moreover, in many publications where an antibody is described, the antigen that it was produced in response to is also described. *See*, for example, Methods section of Reference AA.

Further, searches of publications directed to polynucleotides and the use of those polynucleotides would clearly be overlapping. This is so because in many, if not most, publications which describe polynucleotides, these molecules are described by their function, characterization and/or expression profile. Thus, a search of polynucleotide claims would also provide the Examiner with art directed to the manner in which the claimed polynucleotides could be used in diagnostic and therapeutic indications.

Moreover, searches of publications directed to polypeptides and the use of those polypeptides would clearly be overlapping. This is so because in many, if not most, publications which describe polypeptides, these molecules are described by their function. Thus, a search of polypeptide claims would also provide the Examiner with art directed to the manner in which the claimed polypeptides could be used to treat disease states.

In view of the above, Applicants submit that the searches for polynucleotides, polypeptides, antibodies, and methods of diagnosing and treating disease states using the proteins of the subject invention would clearly be overlapping. Accordingly, Applicants request that the Examiner reconsider and withdraw the restriction requirement and examine the subject matter of Groups I-X together in the present application.

Moreover, should the Restriction Requirement be made final, Applicants respectfully request that upon indication of allowable subject matter, the Examiner rejoin the claims of Group III with Group V (methods of expression of polypeptides).

Applicants retain the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

Conclusion

Applicants respectfully request that the above-made amendments and remarks be entered and made of record in the file history of the instant application. If there are any fees due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 08-3425. If a fee is required for an extension of time under 37 C.F.R. § 1.136 that is not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

Date: May 7, 2003

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